

RemarksAmendments to the Claims

The claims have been amended, as indicated above. The amendments to the indicated claims has been presented in accordance with the proposed revisions to 37 C.F.R. §1.121 as set forth in 1267 OG 106 (25 February 2003). No new matter has been introduced through the amending of the claims.

Rejection of Claims under 35 U.S.C § 102

Claims 10, 11, 13, 18, 19, and 21 are rejected under 35 U.S.C §102 (b) as being unpatentable over Sugitani et al. The Applicants respectfully traverse this rejection. Independent claim10 recites a method of fabricating a fluid ejection device comprising: bonding a top surface of a first substrate to a bottom surface of a second substrate, wherein a patterned etch mask layer is formed on at least one of the top surface of the first substrate and the bottom surface of the second substrate; and etching a fluid channel in the first and second substrates extending through an opening in the patterned etch mask layer. While Sugitani et al. discloses an ink jet recording head with a delaminating feature, this reference does not teach, suggest, or even appreciate, among other things, bonding a top surface of a first substrate to a bottom surface of a second substrate, wherein a patterned etch mask layer is formed on at least one of the top surface of the first substrate and the bottom surface of the second substrate. Contrary to the Examiner's baseless contention, the patterned mask (6P as referenced by the Examiner in the Office Action, mailed 1/4/06) is located on top of the second substrate (5a as referenced by the Examiner in the Office Action, mailed 1/4/06). The patterned mask 6P does not even contact the first substrate (1 as referenced by the Examiner in the Office Action, mailed 1/4/06). As proof of this statement, the Examiner is invited to view Fig. 4 of the Sugitani et al. reference. Also, the Applicants contend that the Examiner is erroneously referring to Sugitanis' layer as a "mask", when in actuality their layer (that stays with the wafer) is patterned by a photo-lithographic

process that USES a mask, but, the mask is NOT part of the final device. The present invention, on the other hand, creates a mask that remains in-situ on/in the substrate, and it's used as an etch-"mask" that actually remains in-situ in the device. Clearly, Sugitani et al. teaches away from the present invention.

With respect to dependent claims 11 and 13, the Applicants contend that these dependent claims are also allowable over the art of record.

With respect to independent claim 18, claim 18 recites a method of fabricating a fluid channel for a fluid ejection device comprising: bonding a top surface of a first substrate to a bottom surface of a second substrate, wherein the top surface of the first substrate has a feed trench; etching a feed hole from a top surface of the second substrate to the top surface of the first substrate; and removing a remaining portion of the first substrate to form a fluid channel through the substrates. While Sugitani et al. discloses an ink jet recording head with a delaminating feature, this reference does not teach, suggest, or even appreciate, among other things, bonding a top surface of a first substrate to a bottom surface of a second substrate, wherein the top surface of the first substrate has a feed trench. Contrary to the Examiner's baseless contention, the feed trench and feed holes of Sugitani et al. are etched onto the first substrate after the first substrate is attached to the second substrate. Also, the Applicants contend that the Examiner is erroneously referring to Sugitanis' layer as a "mask", when in actuality their layer (that stays with the wafer) is patterned by a photo-lithographic process that USES a mask, but, the mask is NOT part of the final device. The present invention, on the other hand, creates a mask that remains in-situ on/in the substrate, and it's used as an etch-"mask" that actually remains in-situ in the device. Clearly, Sugitani et al. teaches away from the present invention.

With respect to dependent claims 19 and 21, the Applicants contend that these dependent claims are also allowable over the art of record. Therefore, the Applicants requests that the Examiner reconsider and withdraw the rejection.

Rejection of Claims under 35 U.S.C § 103

Claims 15-17 and 23-25 are rejected under 35 U.S.C §103 (a) as being unpatentable over Sugitani et al. in view of Tom. The Applicants respectfully traverse this rejection. As discussed above, independent claim10 recites a method of fabricating a fluid ejection device comprising: bonding a top surface of a first substrate to a bottom surface of a second substrate, wherein a patterned etch mask layer is formed on at least one of the top surface of the first substrate and the bottom surface of the second substrate; and etching a fluid channel in the first and second substrates extending through an opening in the patterned etch mask layer. While Sugitani et al. discloses an ink jet recording head with a delaminating feature, this reference does not teach, suggest, or even appreciate, among other things, bonding a top surface of a first substrate to a bottom surface of a second substrate, wherein a patterned etch mask layer is formed on at least one of the top surface of the first substrate and the bottom surface of the second substrate. Contrary to the Examiner's baseless contention, the patterned mask (6P as referenced by the Examiner in the Office Action, mailed 1/4/06) is located on top of the second substrate (5a as referenced by the Examiner in the Office Action, mailed 1/4/06). The patterned mask 6P does not even contact the first substrate (1 as referenced by the Examiner in the Office Action, mailed 1/4/06). As proof of this statement, the Examiner is invited to view Fig. 4 of the Sugitani et al. reference. Also, the Applicants contend that the Examiner is erroneously referring to Sugitanis' layer as a "mask", when in actuality their layer (that stays with the wafer) is patterned by a photo-lithographic process that USES a mask, but, the mask is NOT part of the final device. The present invention, on the other hand, creates a mask that remains in-situ on/in the substrate, and it's used as an etch-"mask" that actually remains in-situ in the device. Clearly, Sugitani et al. teaches away from the present invention.

While Tom discloses test structures for silicon etching, this reference does not alleviate the myriad problems associated with Sugitani et al. For example, Tom does not teach, suggest, or even appreciate, among other things, bonding a top surface of a first substrate to a bottom surface of a second substrate, wherein a patterned etch mask

layer is formed on at least one of the top surface of the first substrate and the bottom surface of the second substrate.

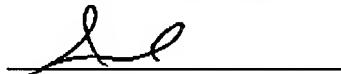
With respect to independent claim 18, Tom does not teach, suggest, or even appreciate, among other things bonding a top surface of a first substrate to a bottom surface of a second substrate, wherein the top surface of the first substrate has a feed trench. Therefore, the Applicants request that the Examiner reconsider and withdraw the rejection.

The Applicants acknowledge the objection of Claims 12, 14, 20, 22, and 26 as being dependent upon a rejected base claim. However, the Applicants aver that independent claims 10 and 18 are allowable over the art of record.

The Applicants have reviewed the art of record cited in the Office Action, but not applied in the rejection. However, the Applicants contend that this unapplied art does not anticipate and/or render obvious the claimed subject matter of the present invention.

In view of the above, it is respectfully submitted that this case is in condition for allowance and now may be passed to issue forth with. A holding to this effect is respectfully requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this patent application, the Examiner is invited to contact the undersigned attorney during normal Mountain Time Zone business hours.

Respectfully submitted,
Chien-Hua Chen et al



James R. McDaniel
Reg. No. 34,481
858.655.4157

Date: 2/3/06

Hewlett-Packard Company
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400